



Title: NUCLEIC ACID MOLECULES AND POLYPEPTIDES FOR IMMUNE MODULATION

Applicant (s): Grant McFadden et al.

Filing Date: October 11, 2001

Serial No.: 09/976,605

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FIGURE 1

TPVgp38aa 1 TLKCYCTVTLKDNGLYDKVFYCHYN 25
Yabagp38 1 MNKLILSLLGCVATCNCITLRYNYTVTVK-NGLYDGVFFDYNDQLVTRI 49
.* **.* ***** **.* **

TPVgp38aa 26 25 (SEQ ID NO: 1)
Yabagp38 50 SYNHETKRGNVN 61 (SEQ ID NO: 2)



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FIGURE 2

YMTV partial gp38 gene (183 nucleotide):

5'
ATGAATAAGTTAATTTTATCGTTGTTGGGTTTTGTGGCAACTTGCAATTGTATAACCTTAAGATATAATTATACCGTTA
CGGTAAAGAATGGATTATACGACGGGGTATTTTTGATTATTACAACGATCAGTTAGTAACGAGGATATCATATAATCA
TGAAACCAAACGAGGAATGTAAAT (SEQ ID NO: 3)

YMTV partial gp38 gene (61 amino acid):

5'
MNKLILSLG FVATCNCITLRYNYTVTVKNGLYDGVFFDYNDQLVTRISYNHETKRGNVN (SEQ ID NO: 2)

SEQ ID NO: 4

MNKLILFSTIVAVCNCITLKYNVTYTLKDNGLYDGVFYDHYNDQLVTKISYNHETRHGNVNFADWFKIS
RSPHTPGNDYNFNFYWYSLMKETLEEINKNDSTKTTSLITGCEYETGLLFGSYGYVETANGPLARYHTGD
KRFTKMTHKGFPAKVGMLTVKNTLWKDVKTYLGGFEYMGC SLAILDYQKMAKGEIPKDTTPTVKVTGNELE
DGNMTLECSVNSFYPPDVITKWIESEHFKGEYKYVNGRYYPEWGRKSDYEPGEPGF PWNKKDKDANTYS
LTDLVRTTSKMSSQLVCVVFHDTLEAQVYTCSEGCNGELYDHLRYKTEEGEGEED*EED*

FIG. 3

09976605 101404

SEQ ID NO: 5

Tana gp38:

AAGCTTCATGAATAAGTTAATATTATTTAGCACAATTGTAGCAGTTTGTA
ACTGCATAACTTTAAAATATAATTATACTGTTACGTTAAAAGATAATGGGTTATAC
GATGGAGTATTTTACGATCATTACAACGATCAGTTAGTAACGAAAATATCAT
ATAACCACGAACTAGACACGGAAACGTAAATTTTAGGGCTGATTGGTTTAA
TATTTCTAGGAGTCCCCACACGCCAGGTAACGATTACAACTTTAACTTTTGGT
ATTCTTTAATGAAAGAACTTTAGAAGAAATTAATAAAAACGATAGCACAAA
AACTACTTCGCTTTCATTAATCACTGGGTGTTATGAAACAGGATTATTATTTG
GTAGTTATGGGTATGTAGAAACGGCCAACGGACCGTTGGCCAGATACCATAC
AGGAGATAAAAGGTTTACGAAAATGACACATAAAGGTTTTCCCAAGGTTGGA
ATGTTAACTGTAAAAAACACTCTTTGGAAAGATGTAAAAACTTATCTAGGCG
GTTTTGAATACATGGGATGTTTCATTAGCTATTTTAGATTACCAAAAAATGGCT
AAAGGTGAAATACCAAAAGATACAACACCTACAGTGAAAGTAACGGGTAAT
GAGTTAGAAGATGGTAACATGACTCTTGAATGCAGTGTAATTCATTTTACCC
TCCTGACGTAATTACTAAGTGGATAGAAAGCGAACATTTTAAAGGTGAATAT
AAATATGTTAACGGAAGATACTATCCAGAATGGGGGAGAAAATCCGATTATG
AGCCAGGAGAGCCAGGTTTTCCATGGAATATTAATAAAGATAAAGATGCAA
ACACATATAGTTTAAACAGATTTAGTACGTACAACATCAAAAATGAGTAGTCA
ACTAGTATGTGTTGTTTTCCATGACACTTTAGAAGCGCAAGTTTATACTTGTT
CTGAAGGATGCAATGGAGAGCTATACGACCACCTATATAGAAAAACAGA
AGAAGGAGAAGGTGAAGAGGATGAAGAAGACGGAAACCCTCGAG

FIG. 4

09075605.101.101

SEQ ID NO: 6

MDKLLLFSTIVAVCNCITLKYNVTVTLKDDGLYDGVFYDHYNDQLVTKISYNHETRHGNNVFRADWFNIS
RSPHTPGNDYNFNFWYSLMKETLEEINKNDSTKTTSLITGCYETGLLFGSYGYVETANGPLARYHTGD
KRFTKMTHKGFPKVGMLTVKNTLWKDVKAYLGGFEYMGC SLAILDYQKMAKGKIPKDTTPTVKVTGNELE
DGNMTLECTVNSFYPPDVITKWIESEHFKGEYKYVNGRYYPEWGRKSNYEPGEPGF PWNKKDKDANTYS
LTDLVRTTSKMSSQPVCVVFHDTLEAQVYTCSEGCNGELYDHLYRKTEEGEGEEDEED*

FIG. 5

09976605.101104

SEQ ID NO: 7

YLD gp38:

ATGGATAAGTTACTATTATTTAGCACAATTGTAGCAGTTTGTAAGTGCATAAC
TTTAAATATAATTATACTGTTACGTTAAAAGATGATGGGTTATACGATGGAG
TATTTTACGATCATTACAACGATCAGTTAGTGACGAAAATATCATATAACCAT
GAAACTAGACACGGAAACGTAAATTTTAGGGCTGATTGGTTTAATATTTCTA
GGAGTCCCCACACGCCAGGTAACGATTATAACTTTAACTTTTGGTATTCTTTA
ATGAAAGAACTTTAGAAGAAATTAATAAAAACGATAGCACAAAACTACTT
CGCTTTCATTAATCACTGGGTGTTATGAAACAGGATTATTATTTGGTAGTTAT
GGGTATGTAGAAACGGCCAACGGGCCGTTGGCCAGATACCATACAGGAGAT
AAAAGGTTTACGAAAATGACACATAAAGGTTTTCCAAGGTTGGAATGTTAA
CTGTAAAAAACACTCTTTGGAAAGATGTAAAAGCTTATTTAGGCGGTTTTGA
ATATATGGGATGTTTCATTAGCTATTTTAGATTACCAAAAAATGGCTAAAGGTA
AAATACCAAAAAGATACAACACCTACAGTGAAAGTAACGGGTAATGAGTTAG
AAGATGGTAACATGACTCTTGAATGCACTGTAAATTCATTTTACCCTCCTGAC
GTAATTACTAAGTGGATAGAAAGCGAACATTTTAAAGGTGAATATAAATATG
TTAACGGAAGATACTATCCAGAATGGGGGAGAAAATCCAATTATGAGCCAGG
AGAGCCAGGTTTTCCATGGAATATCAAAAAAGATAAAGATGCAAATACATAT
AGTTTAACAGATTTAGTACGTACAACATCAAAAATGAGTAGTCAACCAGTAT
GTGTTGTTTTCCATGACACTTTAGAAGCGCAAGTTTATACTTGTTCTGAAGGA
TGCAATGGAGAGCTATACGATCACCTATATAGAAAAACAGAAGAAGGG
GAAGGTGAAGAGGATGAAGAAGACTGA

09975605 101404

FIG. 6

SEQ ID NO: 8

MITKAIVILSIITAYVDASAFVNYTYTLQDDNHRDYFEVTDYFNDILIKRLKLNSETGRPELRNEPPT
WFNETKIRIYYPKNYNFMFWLNRMSSETLDEINKLPETSNPYKTMSLTIGCTDLRQLQVNFYVTVGGNIW
TRFDPKNKRFSKVRSRTPFKVGMLTVKSQHWERVMHLGSMVTLTCPFTADDYYKISKGYIDKPVKPTVT
VTGIERGDNTLICTFDNHYPSSVAVKWYNIEDFAPDYRYDPYVNELLPDTDYLPGEFGYPTITRRLGDK
YLFTSSPRVMVPTIMSNRIACVGFHSTLEPSIYRCVNC SGPEPVLQYQGDRRNDLEDEED

FIG. 7

09976605.101101

SEQ ID NO: 9

Swinepox CIL

ATGATTACTAAAGCGATTGTGATATTGTCTATTATTACAGCATATGTAGATGC
TTCCGCATTCTTAGTATACAATTATACATATACTTTACAAGATGATAATCATC
GATATGACTTCGAAGTCACCGATTATTTTAATGATATACTAATAAAAACGTTTA
AAACTAAATAGCGAGACAGGAAGACCAGAATTAAGAAATGAACCACCAACA
TGGTTTAATGAGACTAAGATTAGATATTATCCGAAAAATAATTATAATTTAT
GTTCTGGCTAAATAGAATGAGTGAAACGCTAGATGAGATAAATAAACTTCCA
GAAACGAGTAATCCTTACAAGACTATGTCCTTGACAATTGGATGTACTGATCT
AAGACAACCTTCAAGTAAATTTTCGGTTATGTTACTGTAGGTGGTAATATATGGA
CACGATTTCGACCCCAAGAATAAACGCTTTAGTAAAGTTAGATCACGTACATT
TCCAAAGGTAGGAATGTAACTGTAAATCACAACACTGGGAACGTGTTATG
GAACATCTTGGATCAATGGTAACATTAACATGTCCGTTTACAGCGGATGATTA
TTATAAAATTTCTAAGGGATATATAGATAAGCCAGTTAAGCCTACTGTTACAG
TTACAGGAATTGAAAGAGGAGATAATACTACATTGATATGCACATTTGATAA
TCATTATCCGTCGTCGGTCGCTGTAAATGGTATAACATCGAGGACTTTGCTC
CGGACTATCGTTATGATCCGTACGTAAATGAATTGCTTCCTGATACGGACTAT
CTACCGGGTGAACCAGGATATCCGACTATAACTAGGAGATTAGGTGATAAAT
ATTTATTTACATCATCACCTAGGGTTATGGTACCAACTATCATGTCTAATAGA
ATAGCATGTGTTGGATTTCATAGTACGTTAGAACCAAGCATATATAGATGTGT
AAACTGCTCGGGACCTGAGCCTGTTTTACAATACCAGGGAGAT
AGAAGGAATGACTTGGAGGATGAGGAGGATTAA

FIG. 8

FIG. 8

ClustalW Formatted Alignments

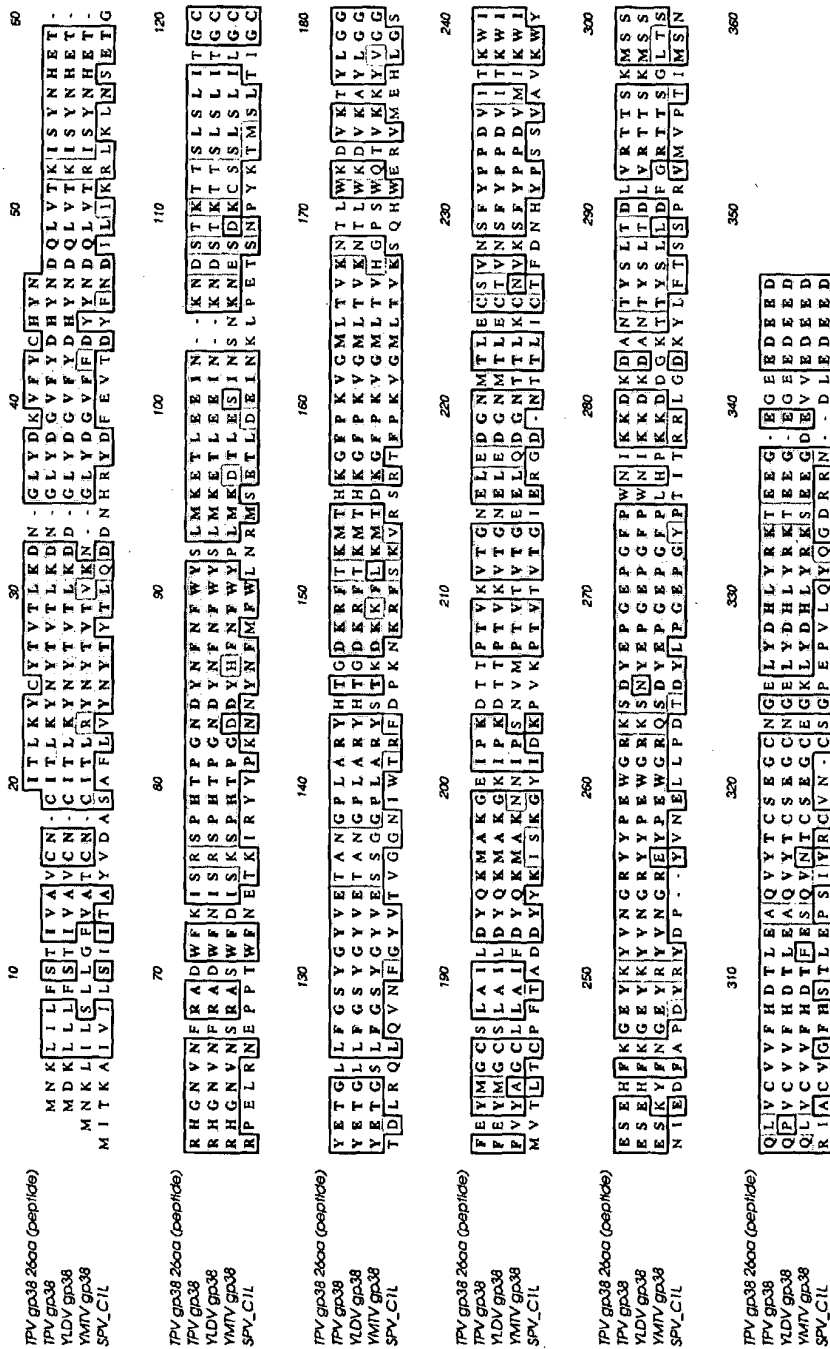


FIG. 9